CLAIMS:

1. An electronic communication system (100), having
- at least one base station (10) having at least one antenna unit (16: 16a, 16b), in particular in coil form, which base station (10) is arranged in particular on or in an object to be secured against unauthorized use and/or against unauthorized access, such as on or in, say, a means of transport or on or in an access system, and
- at least one transponder station (40), in particular in data-carrier form, having at least one antenna unit (44: 44a, 44b), in particular in coil form, which transponder station (40)
-- may in particular be carried with him by an authorized user and/or
-- is designed to exchange data signals (22, 24) with the base station (10), in which case, by means of the data signals (22, 24)
--- the authorization for use and/or access can be determined and/or
--- the base station (10) can be controlled accordingly,

characterized in that
- there is arranged in the base station (10) at least one first delay element (17) for setting a defined, and in particular substantially constant, signal transit time (t_1) within the base station (10) and/or
- there is arranged in the transponder station (40) at least one second delay element (47) for setting a defined, and in particular substantially constant, signal transit time (t_2) within the transponder station (40).

2. A communication system as claimed in claim 1, characterized in that the first delay element (17) and/or the second delay element (47) are/is arranged to be settable (e), multistage (a, b, ... y, z) and switchable (s) and have/has
- at least one digital gate subject to a known signal transit time and/or
- at least one filter and/or
- at least one clocked shift register.

3. A communication system as claimed in claim 1 or 2, characterized in that

- there is connected downstream of the last stage (17z) of the first delay element (17) at least one first decision-making unit (18) that is connected to at least one control unit (12) of the base station (10) and/or to at least one receiver unit (19b) of the base station (10), and/or

- there is connected downstream of the last stage (47z) of the second delay element (47) at least one second decision-making unit (48) that is connected to at least one control unit (42) of the transponder station (40) and/or to at least one receiver unit (49a) of the transponder station (40).

4. A base station (10) for an electronic communication system (100) as claimed in any one of claims 1 to 3, characterized by

- at least one receiver unit (19b) for receiving the data signals (24) from the transponder station (40), which receiver unit (19b) is connected to the antenna unit (16b) associated with the base station (10),

- at least one control unit (12), in particular a microcontroller unit, for controlling the base station (10), which control unit (12) is connected to the receiver unit (19b) and is preferably connected upstream of the first delay element (17),

- the at least one first delay element (17) for setting the defined, and in particular substantially constant, signal transit time (t_1) within the base station (10), and

- at least one transmitter unit (19a) for transmitting the data signals (22) to the transponder station (40), which transmitter unit (19a) is connected to the antenna unit (16a) associated with the base station (10) and is preferably connected downstream of the first delay element (17).

5. A transponder station (40) for an electronic communication system (100) as claimed in any one of claims 1 to 3, characterized by

- at least one receiver unit (49a) for receiving the data signals (22) from the base station (10), which receiver unit (49a) is connected to the antenna unit (44a) associated with the transponder station (10) and is preferably connected upstream of the second delay element (47),

- the at least one second delay element (47) for setting the defined, and in particular substantially constant, signal transit time (t_2) within the transponder station (40),

- at least one control unit (42), in particular a microcontroller unit, for controlling the transponder station (40), which control unit (42) is preferably connected downstream of the second delay element (47), and
- at least one transmitter unit (49b) for transmitting the data signals (24) to the base station (10), which transmitter unit (49b) is connected to the antenna unit (44b) associated with the transponder station (40) and is preferably connected downstream of the control unit (42).

6. A transponder station as claimed in claim 5, characterized in that the transponder station (40) is arranged in at least one data carrier, and in particular in at least one card, and specifically in at least one chip card.

7. A method of detecting and/or guarding against at least one, in particular external, attack, and preferably at least one relay attack, on at least one electronic communication system (100) as defined in the preamble to claim 1, characterized in that there are/is set
- within the base station (10), a defined, and in particular substantially constant, signal transit time (t_1) and/or
- within the transponder station (40), a defined, and in particular substantially constant, signal transit time (t_2),

thus enabling the attack to be detected if the sum of
- the signal transit time (t_1) within the base station (10),
- the signal transit time (t_2) within the transponder station (40) and
- twice the signal transit time (t_s) of the data signals (22, 24) between the base station (10) and the transponder station (40)

exceeds a defined threshold value ($t_{s,max}$).

8. A method as claimed in claim 7, characterized in that

[a.1] a pulse that forms at least part of the data signal (22) to be transmitted to the transponder station (40) is conveyed within the base station (10) to at least one first delay element (17),

[a.2] the pulse, having been delayed by the first delay element (17), is then fed to at least one transmitter unit (16a) associated with the base station (10) and is received directly,

i.e. with no relevant additional delay, by at least one receiver unit (16b) associated with the base station (10),

[b] the pulse that forms at least part of the data signal (22) to be transmitted to the transponder station (40) is fed through the entire first delay element (17a, 17b ... 17y, 17z) substantially at the same time,

[c] at least one first decision-making unit (18) that is connected downstream of the last stage (17z) of the first delay element (17) signals to at least one control unit (12) of the base station (10) whether it is the delayed pulse (see method step [a.2]) or the pulse fed through the entire first delay element (17a, 17b, ... 17y, 17z) (see method step [b]) that arrives at the first decision-making unit (18) first, and

[d] the first delay element (17) is so set or switched or corrected that the delayed pulse (see method step [a.2]) and the pulse fed through the entire first delay element (17a, 17b, ... 17y, 17z) (see method step [b]) arrive as nearly simultaneously as possible.

9. A method as claimed in claim 7 or 8, characterized in that

[e] a pulse that forms at least part of the data signal (22) received from the base station (10) is conveyed within the transponder station (40) to at least one second delay element (47),

[f] the pulse that forms at least part of the data signal (22) received from the base station (10) is also fed through the entire second delay element (47a, 47b ... 47y, 47z) substantially at the same time,

[c] at least one second decision-making unit (48) that is connected downstream of the last stage (47z) of the second delay element (47) signals to at least one control unit (42) of the transponder station (40) whether it is the delayed pulse (see method step [e]) or the pulse fed through the entire second delay element (47a, 47b, ... 47y, 47z) (see method step [f]) that arrives at the second decision-making unit (48) first, and

[d] the second delay element (47) is so set or switched or corrected that the delayed pulse (see method step [e]) and the pulse fed through the entire second delay element (47a, 47b, ... 47y, 47z) (see method step [f]) arrive as nearly simultaneously as possible.

10. Use of at least one electronic communication system (100) as claimed in any one of claims 1 to 3, and in particular of at least one transponder station (40) as claimed in claim 5 or 6, for authenticating and/or for identifying and/or for checking the authority to use,

enter or the like an object to be secured by means of the communication system (100), such as, say, a means of transport or an access system.